I CLAIM:

1. An ultrasound catheter comprising:

a tubular member;

at least one ultrasound radiating member positioned with the tubular member, the ultrasound radiating member comprising a front face and a rear face, each having *n* sides, wherein $n > 4$, *n* faces connecting the sides of the front and rear faces, and a central bore extending from the front face to the rear face, wherein at least a portion of the surfaces of the inner bore and *n* faces are coated with a conductive material; and

a first wire and a second wire, the first wire being connected to the inner bore and the second wire being connected to at least one of the *n* faces.

2. The ultrasound catheter of Claim 1, wherein the front and rear faces are substantially parallel to each other.

3. The ultrasound catheter of Claim 1, wherein the sides faces are substantially rectangular.

4. The ultrasound catheter of Claim 1, wherein the central bore is cylindrical.

5. The ultrasound catheter of Claim 1, wherein the conductive material is copper.

6. The ultrasound catheter of Claim 1, wherein $n = 5$.

7. The ultrasound catheter of Claim 1, wherein a plurality of ultrasound radiating members are positioned in the tubular member, and wherein the first wire runs through the central bore of each ultrasound radiating member, and wherein the second wire contacts one of the side faces of each ultrasound radiating member.

8. The ultrasound catheter of Claim 1, wherein the ultrasound radiating members comprise a piezoelectric material.

9. The ultrasound catheter of Claim 1, further comprising a voltage difference applied between the first and second wires.

10. A method for manufacturing an ultrasonic catheter comprising:

providing a sheet of piezoelectric material;

drilling a plurality of holes into the piezoelectric material, each hole having an inner surface;

making a plurality of cuts into the sheet, each cut having a depth less than the depth of the holes, the cuts forming an elongate polygon that is generally centered about one of the holes, the polygon having an outer surface;

plating at least a portion of the inner and outer surfaces with a conductive material;

cutting a backside from the sheet so as to separate a plurality of individual elongate piezoelectric polygons; and

disposing at least one elongate piezoelectric polygon within a tubular catheter body.

11. The method of Claim 10, wherein the backside is cut substantially parallel to a top surface of the sheet of piezoelectric material.

12. The method of Claim 10, wherein the holes are cut through the piezoelectric material.

13. The method of Claim 10, wherein the holes are blind holes that do not pass through the piezoelectric material.

14. The method of Claim 10, wherein a plurality of elongate piezoelectric polygons are mounted on a central core configured to be disposed within the tubular catheter body.

15. The method of Claim 14, further comprising electrically connecting the piezoelectric polygons in series.

16. The method of Claim 10, wherein a plurality of elongate piezoelectric polygons are mounted on an electrically conductive central core configured to be disposed within the tubular catheter body.

17. An apparatus comprising:

an elongate ultrasound radiating member having a hollow, cylindrical central core and three or more substantially flat sides;

a first cylindrical electrode applied to the hollow, cylindrical central core;

a second electrode applied to at least one of the sides; and

a tubular catheter body configured to surround the elongate ultrasound radiating member.

18. The apparatus of Claim 17, wherein the ultrasound radiating member comprises a piezoelectric material.

19. The apparatus of Claim 17, wherein the ultrasound radiating member has five substantially flat sides.

20. The apparatus of Claim 17, wherein the ultrasound radiating member has three substantially flat sides.

21. The apparatus of Claim 17, wherein the ultrasound radiating member has a first end and a second end opposite the first end, and wherein the first end has a cross-sectional area that is less than a cross-sectional area of the second end.

22. The apparatus of Claim 17, wherein the ultrasound radiating member has a first end and a second end opposite the first end, and wherein the first end has a cross-sectional area that is substantially equal to a cross-sectional area of the second end.

23. A method comprising:

providing a substantially planar slab of piezoelectric material having a top surface;

drilling a plurality of holes through the top surface and into the slab;

making a plurality of cuts through the top surface and into the slab, the cuts forming a plurality of polygons that are generally centered about one of the holes;

plating the slab with an electrically conductive material;

removing the electrically conductive material from the top surface of the slab;

cutting the slab substantially parallel to the top surface to separate individual elongate piezoelectric polygons from the slab; and

positioning at least one of the elongate piezoelectric polygons within a tubular catheter body.

24. The method of Claim 23, wherein a plurality of elongate piezoelectric polygons are positioned within the tubular catheter body.

25. The method of Claim 24, further comprising electrically connecting the elongate piezoelectric polygons in series.

26. The method of Claim 24, further comprising electrically connecting the elongate piezoelectric polygons in parallel.

27. The method of Claim 23, wherein the holes are drilled through the slab.

28. The method of Claim 23, wherein the polygons are pentagons.

29. The method of Claim 23, wherein the polygons are triangles.